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MARSHALL STAR

Serving the Marshall Space Flight Center Community July 13, 2006

Discovery mission continues; landing set Monday

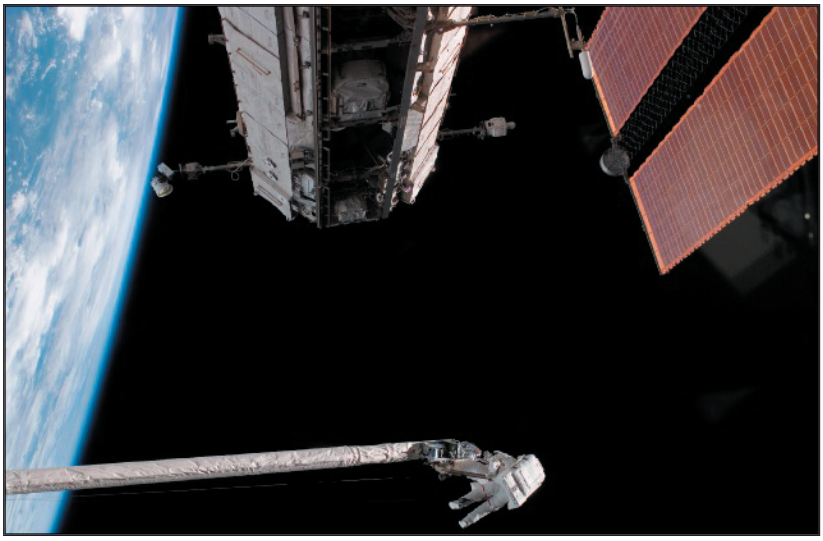
By Sanda Martel from Combined Reports

Space Shuttle Discovery has been cleared for a Monday, July 17, landing following a spectacular Independence Day launch from the Kennedy Space Center, Fla., and 13-day mission to the International Space Station.

The mission is testing new equipment and procedures to increase the safety of space shuttles and delivering critical supplies and cargo to the International Space Station for repair and future expansion of the outpost.

Discovery also delivered a third crew member to live on board the station, the first time a three-person crew has resided on station for a long duration — since May 2003.

Discovery docked with the station on Thursday, July 6, at 9:52 a.m. CDT and used the shuttle robotic arm to inspect the heat shield. On Friday, July 7, the crew used the station's robotic arm to lift the Leonardo multi-purpose logistics module out of Discovery's payload bay and attached it to the station. Commander Steve Lindsey and Expedition 13 Flight Engineer Thomas Reiter performed leak checks before entering Leonardo, which delivered more than 7,000 pounds of supplies and equipment for the station.



NASA

Astronauts Piers J. Sellers and Michael E. Fossum, STS-121 mission specialists, work in tandem on the shuttle's remote manipulator system/orbiter boom sensor system during the mission's first scheduled session of extravehicular activity.

The first spacewalk of the mission was Saturday, July 8, during which Mission Specialists Mike Fossum and Piers Sellers had two major tasks. First, they performed maintenance on the station's mobile transporter, and second, they tested the capability of the shuttle's robotic arm and its 50-foot extension to act as a platform for spacewalkers making repairs.

The second spacewalk by Sellers and Fossum on Monday, July 10, allowed the pair to install a spare thermal control system pump on the outside of the Quest Airlock. Sellers and Fossum then performed maintenance on the mobile transporter, replacing a reel assembly for a cable that provides power and data to the station's mobile transporter. The spacewalk lasted six hours and 47 minutes.

Work continues to transfer items to and from the shuttle, the space station and Leonardo, which will be returned to the payload bay packed with more than 4,300 pounds of science experiment results, unneeded items and trash.

The final spacewalk on Wednesday, July 12, featured on-orbit shuttle heat shield repair techniques using a specialized material that engineers at the Marshall Center's Materials and Processes Laboratory helped develop. The material, dubbed "NOAX" for non-oxide adhesive experiment, is made of a pre-ceramic polymer resin that contains silicon carbide and other ceramic powders. The material could be used in the future to repair cracks on an orbiter wing leading edge, should it be necessary.

Fossum and Sellers demonstrated repair work on pre-positioned heat shield materials in the payload bay. Among the tools they used were a space-certified caulk gun and a variety of spatulas to manipulate the test materials. The duo also demonstrated an infrared camera by performing a 60-second recording of two sample damaged tiles. The camera is designed to capture temperature gradients that will indicate invisible damage.

Leonardo will return to Discovery's payload bay on Friday, July 14, setting the stage for STS-121's departure on Saturday and landing at Kennedy Space Center on Monday, July 17, at 8:07 a.m.

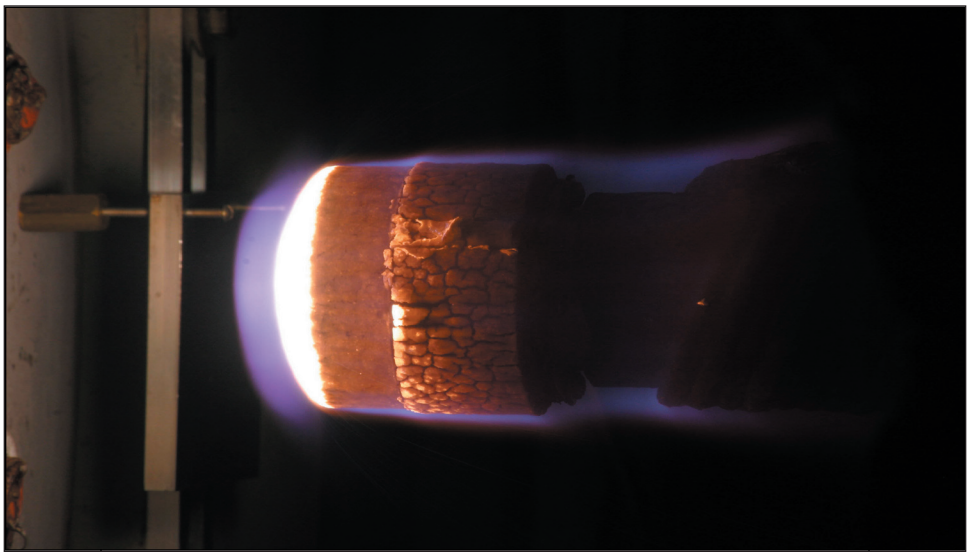
Beating the heat of re-entry

Marshall's In-Space Propulsion team tests heat shield sensors

By Sherrie Super

NASA's In-Space Propulsion Technology Program has successfully tested an advanced sensor to help spacecraft beat the heat of re-entry. The sensor gauges the temperature, along with the amount of erosion that occurs in heat-shielding materials as a spacecraft enters a planet's atmosphere.

Managed by the aerocapture team at the Marshall Center, the tests of a newly designed advanced recession transducer occurred May 15-17 at the Ames Research Center Interaction Heating Facility Arc Jet Complex at Moffett Field, Calif.



NASA/MSFC/Steve Moon

Sensor tests simulate the intense heat generated by a spacecraft's entry into a planet's atmosphere.

"The sensor is being considered for spacecraft heat shields, in particular those for aerocapture vehicles," said Bonnie James, aerocapture technology manager at Marshall.

A near-propellantless flight maneuver, aerocapture uses a planet's or moon's atmosphere to place a space vehicle in its proper orbit. The atmosphere acts as a brake to slow down a spacecraft, transferring the energy associated with the vehicle's high speed into thermal energy, which helps slow the spacecraft.

"Aerocapture can greatly reduce the mass of a spacecraft," said James, "because the planet's atmosphere is doing much of the work, rather than relying on massive amounts of fuel to slow and maneuver the spacecraft into orbit."

Without the added weight of the fuel — not to mention the pumps, tanks, thrusters and other components to support storage and use of the fuel for propulsion — a spacecraft can go faster from the beginning, saving money and reducing the total trip time, she added.

"For every kilogram of weight we save, we can carry that same amount of weight in additional science instruments," said James. "Or we can reduce the size of the launch vehicle. The important thing is that we have more options."

During the recent tests, engineers collected data on the performance of the Hollow aErothermal Ablation Temperature detector. Known by its acronym HEAT, the new sensor was tested against the Analog Resistance Ablation Detector, or ARAD, flight-proven in Galileo's mission to Jupiter which launched in 1989.

Both sensors track ablation, a process that helps protect space vehicles from the intense heat generated by friction when a spacecraft enters a planet's atmosphere. During the ablation process, specially designed materials absorb the heat to form a "char" layer. This newly formed layer then radiates the heat into space, as well as sending superheated particles away from the spacecraft, where they pose minimal risk to the craft or its contents.

As part of the tests, engineers also investigated different methods of pressure-port construction. They tested the performance of stainless steel ports, along with simple holes in the ablative material.

Pressure ports act as conduits between the exterior of a space vehicle and the vehicle's interior, where pressure sensors are located.

"It's very important to new propulsion technology development that we build in ways to measure the performance of our spacecraft systems," said James. "Recession and pressure sensors will collect critical data on the performance of the systems, which will enable

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Engineers at Ames Research Center prepare for a recession sensor test.

Employee inspired by Geveden's talk

Recently, I had the privilege to attend a Skip Level Meeting with the Associate Administrator, Rex Geveden.

I learned a lot and received a great context for going about my work in change management. I am not sure that in my short time at NASA I have ever received this meaning in such a concise, and understandable way.

Vicky Scherberger

Rex asked that we share what he shared but, most importantly, stay focused on what he shared.

He asked us to stay mission focused. Do the stuff that NASA needs to do. If it doesn't get us to the moon, or support a science mission or a test flight, etc., don't do it.

He gave an example of how elaborate, coffee-table quality publications may be beautiful but they may not support the mission. The question to ask is, "Does it add value?" If it doesn't add value, then stop it.

I am leaving work today pretty energized about how I can make better decisions from my small part of NASA that supports the mission. I understand better why we are going back to the moon. And I feel inspired. This was the shot in the arm that I needed. My husband, Richard, had commented to me recently that I seemed to focus on unimportant things during the day and that it was affecting me when I got home. He's right. Reminds me of the saying, "Sometimes the littlest things in life are the hardest to take. It is easier to sit on a mountain than on a tack." I am getting rid of the tacks. My focus is on the mountain or in this job, the moon.

Below are the things that meant the most to me. Please note that these are my notes and represent the highpoints from my perception. Rex centered his thoughts on three components. Those components and my notes about them follow:

1. Adjust the portfolio.

- NASA shouldn't have to "hitch a ride" to space.
- We must succeed with exploration.
- We must be able to demonstrate that we understand what the president told us to do.
- It's important to get the projects to the field and get support from the field.
- If you support American ideals (freedom, equality, self-government), then you should support American leadership in settlement of the solar system.

2. Get the institution right.

- Have 10 healthy centers.
- Get NASA employees deeply involved in space. Ensure that our 18,000 badged NASA employees have meaningful work.
- Use full cost so that it works for the agency. Full cost accounting should show where the money goes.

3. Get the organization right.

- There are now three governances (Strategic, Operational, Programs). These support a lean organization. Line organizations make all other decisions.
- It's OK for a civil professional fight. The objective is to get to the right decision.
- It is our right and our duty to speak up. The agency will not tolerate any negative consequences for speaking out.
- We must "Be NASA." We must own our architecture, our systems engineering, our history, and our intellectual content.
- We listen to advisors, but we make the decisions. NASA is in charge of executing the nation's space programs.

Vicky LH Scherberger
Marshall Center's Office of Human Capital

Director of Strategic Analysis and Communications

Rosalie Allen appointed to Senior Executive Service

By Rita Roberts

Rosalie W. Allen was recently appointed to the Senior Executive Service as Director of the Office of Strategic Analysis and Communications at the Marshall Space Flight Center. The Senior Executive Service is the personnel system that covers most of the top managerial, supervisory and policy positions in the executive branch of the federal government.

Rosalie Allen

Helping enable the center's missions, Allen has served as a key leader of Marshall's Office of Strategic Analysis and Communications, a key support office at Marshall, since October 2004, when she was named deputy director of the office. As leader of this organization, Allen is responsible for leading the development of an integrated strategic analysis, planning and communications capability that will support key center decision making and relationship building based on business knowledge, organizational performance assessment, priority and strategy.

Allen oversees communications planning and implementation designed to foster effective stakeholder relationships, strategic research and analysis of stakeholders and the external environment.

She also oversees performance and capability management, to define, develop and enhance analytical skills and competencies for the center — all designed to better integrate data and information between and among organizations and create greater organizational awareness, preparedness and planning.

From 2001 to 2004, prior to leading the Office of Strategic Analysis and Communications, Allen managed NASA's Space Launch Initiative Program Planning and Control Office — the office responsible for programs that investigated future NASA space transportation systems. She was responsible for program planning and resource management of NASA's largest research and development effort of that time.

In 1999, Allen served as program development manager of Marshall's Space Transportation Directorate, managing planning requirements and communication strategies; formulating and implementing organizational and program plans; and guiding advocacy for Marshall's space transportation systems.

Allen served as program manager of NASA's Space Product Development Program from 1996 to 1999, leading the agency's commercial microgravity research efforts.

See Allen on page 7

Marshall's Daniel J. Davis named to Senior Executive Service

By Sheri Bechtel

Daniel J. Davis, manager of the Upper Stage Office, part of the Exploration Launch Projects Office at the Marshall Center, has been appointed to the federal government's Senior Executive Service.

The SES is the federal personnel system covering most top managerial and policy positions in the executive branch.

Davis has served in his current position since September 2005. He leads development of the upper stage for NASA's Ares I crew launch vehicle, which will transport the Crew Exploration Vehicle — the module that can carry up to six astronauts — to space. Davis oversees implementation of project requirements and controls and allocates resources for the design, testing and flight of the upper stage element.

The Exploration Launch Projects Office at Marshall has overall responsibility for developing the Ares I and Ares V launch vehicles — keys to the Vision for Space Exploration. The Vision outlines NASA's future exploration goals to return humans to the moon and travel to Mars and destinations beyond. The heavy-lifting Ares V is the agency's primary vessel for safe, reliable delivery of large-scale resources and hardware to space.

Following his selection to the SES development program in 2005, Davis was temporarily assigned to NASA's Kennedy Space Center, Fla., supporting shuttle return-to-flight efforts. He worked with shuttle management to resolve issues related to shuttle propulsion systems. The assignment provided insight into leadership skills, management techniques and tools used to accomplish shuttle missions.

Daniel Davis

From 2004 to 2005, Davis was manager of the Propulsion Structural, Thermal and Fluid Analysis Division in the Propulsion Systems Department of the Engineering Directorate at the Marshall Center. He oversaw engineering analysis and performance assessment of all propulsion systems and components, such as the space shuttle main engines and solid rocket motors. In early 2004, he was named deputy manager of the department.

From 2002 to 2004, Davis was manager of Marshall's Rocket Engine Prototype Project, or RS-84. He was responsible for all business and technical activities for the project, including design, development and testing of the prototype engine, part of NASA's

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In-Space

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us to build better spacecraft in the future."

Measurements obtained by pressure sensors help engineers reconstruct the spacecraft's flight through the atmosphere. This enables spacecraft designers to compare actual flights to flights simulated in a laboratory setting. The data gathered by this process helps improve future flight simulations.

Together with leading propulsion researchers from academia, industry and other government organizations, NASA's In-Space Propulsion Technology Program seeks to identify, fund and fly aerocapture technologies that promise to enable a new era of scientific discovery throughout the solar system.

The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.

NASA administrator comments on the importance of sensors

***Editor's note**: The following is an excerpt from NASA Administrator Michael Griffin's remarks to the U.S. Space Foundation National Space Symposium in Colorado Springs, Colo., April 2006.*

"With respect to aeronautics, we missed a great opportunity with our recent Genesis and Stardust missions. We could have instrumented these spacecraft to gather information useful for aeronautical science at the highest mach numbers ever recorded during atmospheric entry. So think about the kinds of synergies that we can achieve between the science, aeronautics and exploration if we can obtain on our next Mars missions a better characterization of its atmosphere.

"Such information would allow us to design better entry vehicles to allow more landed mass at Mars, rather than having to use conservative Viking-era entry system designs. And, last summer, we realized that we knew very little about the effect of shuttle tile gapfillers on the high-speed, rarified gas flow which characterizes a shuttle re-entry. How many aeronautics experiments could have been done over the years using the shuttle as the world's highest performance aerodynamic vehicle, and how many have been?

"These are all small things. Are there big payoffs that could result from a broader view? I'll bet there are, but I know that we don't yet know what they are, and we won't find them unless we look."

Classified Ads

To submit a classified ad to the Marshall Star, go to Inside Marshall, to "Employee Resources," and click on "Employee Ads — Submit Ad." Ads are limited to 15 words, including contact numbers. No sales pitches. Deadline for the next issue is 4:30 p.m. Thursday.

Miscellaneous

Wedding dress, cream color w/veil, size 8-10, $150. 880-9025

Land Pride 48" finishing mower, 3-pt. hitch, $750. 656-0043

Aquarium w/stand, 30-gallon, fish, light, pumps and all accessories, $130. 526-4149

New CRT 17" computer monitor, $47; MemoryStick, 1 gigabyte, $39. 655-1986

Six side-by-side plots, Crestview Cemetery, Guntersville, $3,000. 256-505-3993

Two whirligig turbine-type attic ventilators, new, $35 each. 881-3061

Radio Flyer all-terrain red wagon, wood sides, big rubber tires, $100. 353-0370

Roland TD6V drum kit, only used in church, $1,295. 256-656-4203

Labrador retriever puppies, born 5/12/06, 4 boys, 2 girls, shots, sire AKC. 498-2638

Kodak digital camera, 6.2, w/warranty and printer dock. 256-654-0816

Aluminum diamond-plate tool box for full step-side pickup, $100. 852-2438 after 4 p.m.

Boy's bike with training wheels. 837-5113

Baby changing table/dresser w/mirror to convert to dresser, Maple finish. 880-2290

Weider Pro Power Stack home workout system, $175. 379-4677

GRETSCH G6118T 120th Anniversary arch-top electric guitar w/TV Jones p/ups, case, all papers, $1,850. 256-303-3702

Dagger Medieval white-water kayak, $200. 348-8640

Plus-size women's clothing, sizes 14 and up, pricing varies starting at $5. 859-3674

Sofa, blue w/oak trim, $100; Hitch receiver for full-size truck, $50. 256-464-1217

Eclipse 4100Hr/A Elliptical Machine, less than 1 yr. old, $250. 509-9765

Vehicles

1999 GMC Yukon Denali, 134K miles, maroon w/gray leather, loaded, CD/DVD, $9,500. 256-777-4030

1960 Chevrolet Corvair project, some rust, need minor repairs, mostly original. 256-527-8798

2003 Honda Accord EX coupe, 58K miles, leather interior, $16,900. 721-1234

1999 GMC Suburban, automatic, 87K miles, white w/leather, 3rd seat, running boards, luggage rack, $12,425. 256-881-0760

2002 Nissan Pathfinder SE, 64K miles, Bose CD changer, bronze, rack, rails, $14,300. 880-9025

2005 Ford Focus SE, 4-door, all power options, CD, aluminum wheels, $9,300. 931-728-6337 Manchester, Tenn.

2000 Nissan Altima, black, one-owner, $5,000. 881-7690

2003 Jeep Liberty, Renegade Edition, 29K miles, all options, $17,000. 426-8887

1992 Ford Mark III full-size pleasure van, small V8 engine, $3,000. 753-2583

2000 Subaru Forester L, one-owner, 108K miles, new tires and battery, $7,500. 682-9800

2005 Kawasaki Ninja 250, warranty until 2010 transferable at no charge, 4.9K miles. 256-503-7327

1996 Nissan SE pickup, King Cab, automatic, 4-cylinder, 2-wheel drive, white, 97K miles, $4,000. 837-6903

2002 Prowler 5th wheel, sleeps 8, bath, refrigerator/freezer, AC/heat, 18K miles. 721-1260

1998 Chevrolet Cavalier, 4-cylinder, burgundy, cruise, keyless, a/c, all-power, CD/radio, 153K miles, $1,290. 256-603-3558

1991 Honda CRX Si, 189K miles, tahitian green, 36-38 mpg. 256-431-7321

2004 Harley Davidson Road King Classic, 11K miles, pearl white, touring seat, immaculate, $17,200. 776-0811

1988 Chevy S-10 pickup. $1,700. 509-8794

2002 Chevy Tahoe LS, white, 4WD, V8, automatic, all-power, 45K miles, $20,000. 852-6548

1996 Cadillac DeVille, loaded, hunter green, $3,600; 1995 DeVille Concours, black, $2,500. 256-520-2802

Villian II ski boat, new motor, $2,800. 679-0073

Wanted

Working (recording/playing) VCR. 256-777-8229

Used washer and dryer in good condition. 379-3887

In-home care provider for 4-year-old girl and 1-year-old boy, 20 hours per-week. 503-3940

Baby crib. 348-7146

Found

Pair of men's glasses in lower East parking lot of Bldg. 4203. Call 544-1846 to claim/identify

Marshall and local company work together

Orion contributes to NASA's crew launch vehicle

By Tom Knight and Sheri Bechtel

Engineers from NASA and Orion Propulsion in Madison, Ala., have teamed up to develop a unique device that could help manage the use of launch vehicle or spacecraft propellants. It's a component that could be used on the upper stage of NASA's Ares I crew launch vehicle and the Earth Departure Stage of the Ares V cargo launch vehicle.

The device is a small regulator, or valve, that controls the flow of liquid and gaseous propellants in a vehicle's pressurization. The hardware development effort is part of a Space Act Agreement coordinated through the Small Business Technology Transfer Program at the Marshall Center. Recently, NASA representatives and key personnel from Orion Propulsion met to begin work outlined in the three-year agreement, which was signed in March.

The small regulator could be used for the Ares I upper stage main propulsion system's pressurization system. It also could be used for the Reaction Control System in the launch vehicle's upper stage, and for the Crew Exploration Vehicle, which can transport up to six astronauts to space and is carried atop the Ares I launch vehicle.

The regulator being developed by the Orion team is an integrated design that combines three functions — a valve, a pressure sensor and a temperature sensor — into one piece of hardware. The regulator's objective is to maintain constant pressure downstream of the valve regardless of the flow of the propellant, thus improving fuel usage. If the ratio is off by even the smallest of margins, there is a possibility that unburned fuel will remain in a tank, which results in lost payload volume and weight.

The regulator also uses magnetostrictive materials, which change shape as a magnetic field — the cause of force being exerted on the material — is applied. When a magnetic field is induced, the length of the material grows and shrinks in diameter, causing the valve to open. The reverse occurs when a magnetic field is not applied. This technique is used to open and close the valve.

The goal of this development effort is to create a sensor-valve system that produces a very fast regulator. The Orion design could decrease the volume, weight and complexity of spacecraft pressurization systems by providing simpler, more robust valves with a response time that could be upgraded to nanoseconds.

For NASA, the work could expand in-house knowledge and tools for the control of ullage space — the void or gaseous space above liquid propellants in a tank — and tank pressurization of propellant feed systems. It also could help support a test bed for the Ares I upper stage cryogenic main propulsion system and Reaction Control System pressurization.

Orion specializes in the design, fabrication and hot/cold testing of rocket system components. "We're proud to be a part of a technological advancement that could be of use to the Ares I crew launch vehicle and Crew Exploration Vehicle projects. We envision a finely controlled, very fast regulating commercial product applicable to a variety of aerospace markets," said Tim Pickens, president of Orion.

This is not the first contract Orion has been awarded from NASA. The local company received its first NASA Small Business Innovation Research contract to develop an oxygen-methane thruster earlier this year.

"When Marshall and local businesses team together, everyone wins," said Helen Stinson, program manager of the Small Business Technology Transfer Program at Marshall.

Tom Knight, a technical writer with Trax supporting the Engineering Directorate, and Sheri Bechtel, an ASRI employee supporting the Office of Strategic Analysis and Communications, collaborated on the article.

David Higginbotham/MSFC

Attending the Orion Propulsion Space Act Agreement kick-off meeting are, from left, Jim Richard, NASA technical lead; Helen Stinson, Marshall's Small Business Technology Transfer Program manager; and Tim Pickens, Orion's president.

'Focus on Marshall' looks at X-ray Calibration Facility, Test Cell 103

"Focus on Marshall" continues to spotlight Marshall's people and their work with the newest edition now available on "Inside Marshall." It will be broadcast on Marshall TV and Desktop TV at 11 a.m., noon and 1 p.m. on Tuesday, July 18, and Thursday, July 20.

This month's program features a segment on the Marshall Center's X-ray Calibration Facility — the world's largest, most advanced laboratory for simulating X-ray emissions from distant celestial objects.

Also featured is a test cell in the East Test Area where Marshall engineers are preparing to conduct igniter tests for the J-2X upper stage engine for the Ares I crew launch vehicle.

Allen

Continued from page 4

She provided management and direction of activities to ensure that 15 flight research projects were delivered for the space shuttle and International Space Station.

From 1995 to 1996, Allen was business manager for NASA's Microgravity Research Program Office, responsible for developing and coordinating overall budget and schedule activities for research projects at five NASA field centers.

Allen began her career at NASA in 1989, serving as a business manager for various NASA projects, including advanced space transportation programs and multiple microgravity projects. From 1986 to 1989, prior to joining NASA, Allen was a systems engineer at the U.S. Army Missile and Space Intelligence Center in Huntsville, where she supported engineering studies to evaluate the effectiveness of foreign defense systems.

Throughout her 17-year NASA career, Allen has received numerous awards, including the NASA Medal for Exceptional Achievement in 2001 for significant contributions to NASA's space transportation programs; a NASA Administrator Certificate of Appreciation in 1997 for support in the development of the Microgravity Research Program Office; a Space Flight Honoree Award in 1993 for dedication to quality work and flight safety; several NASA Special Service Awards; and numerous NASA Group Achievement Awards.

A native of Stockton, Ala., Allen earned a bachelor's degree in industrial engineering in 1985 from Auburn University in Auburn, Ala.

She also completed a NASA Fellowship at the Simmons Graduate School of Management in Boston in 1997. Additionally, she has pursued graduate studies in engineering at the University of Alabama in Huntsville.

The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.

Davis

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effort to develop a next-generation, reusable launch system.

Davis served from 2000 to 2002 as deputy manager of the 2nd Generation Reusable Launch Vehicle Program office at Marshall, assisting in the planning and directing of systems research, design, development and test activities for next-generation launch vehicle technologies and hardware. He also oversaw the program's work acquisition strategy, including evaluation of industry proposals and selection of contractors for NASA activities.

From 1996 to 2000, Davis was manager of the Low Cost Technology Project in NASA's Advanced Space Transportation Program Office at Marshall. He was responsible for overall management of the design, fabrication and testing of the Fastrac engine, a turbopump rocket engine developed at Marshall to propel future launch vehicles.

From 1995 to 1996, he was team lead of the X-34 Upper Stage Propulsion Team at Marshall, responsible for all technical issues related to propulsion requirements for the X-34 experimental rocket, a flight demonstrator for advanced technologies and operations. He served from 1994 to 1995 as chief of the Solid Rocket Motor Design Branch at Marshall.

Davis also served in various leadership positions in the private sector. From 1988 to 1989, he was a design engineer for the Boeing Company in Huntsville, and from 1986 to 1988, he was a manager for Advanced Technology Incorporated in Huntsville.

Davis initially joined NASA in 1983 as a design engineer in the Ground Support Equipment Branch of the Mechanical Design Department at the Marshall Center. He designed and developed ground support equipment hardware for various NASA projects, including several space shuttle payloads and the Hubble Space Telescope.

During his NASA career, Davis has received numerous honors and awards. He received NASA's Exceptional Achievement Medal in 2002 for his work in the 2nd Generation Reusable Launch Vehicle Program and in 1992 for his work in program development and management.

A native of Birmingham, Ala., Davis graduated in 1983 with a bachelor's degree in mechanical engineering from Auburn University in Auburn, Ala. In 2005, he completed a Senior Executive Fellowship at Harvard University's John F. Kennedy School of Government in Cambridge, Mass.

The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.

Marshall's MAPTIS II Team wins One NASA Peer Award; and is named 'Center Best'

By Lori Meggs

A Marshall Engineering Directorate team has received a One NASA Peer Award and been named Center Best for developing an information system that provides a centralized materials database for NASA flight hardware and programs.

The development team for Marshall's Materials and Processes Technical Information System II, or MAPTIS II, was recognized last month at Marshall's annual Honor Awards.

The One NASA Peer Awards Program allows peers to recognize individuals and teams whose achievements support NASA's strategic goals and use an approach consistent with the concept of One NASA. Civil servant and contractor employees at each NASA center are selected for Peer Awards. A "Center Best" then is chosen from those initially selected at each center.

MAPTIS-II is an agency pioneer, incorporating the One NASA approach by offering processes designed for sharing work and distributing its efficient processes among NASA centers and mission directorates. This database helps users find authoritative information and simplifies decision making for selecting and using various materials and processes.

"We're just trying to do our part to make better products with this user-friendly system," said Michael Mitchell, lead for the Marshall MAPTIS II Development Team. "If you know how you want your material to perform and you put the characteristics you desire into the database, then MAPTIS II will return possible candidates for what you need. It's that easy."

The system's predecessor, MAPTIS, consisted primarily of space environmental data generated by NASA test organizations, along with materials certified for space applications. Contents of MAPTIS-II have been expanded to include mechanical, physical and thermal protection system materials properties. MAPTIS II also includes a Failure Analysis Database that documents the cause, effect and lessons learned from numerous anomalous events.

"We were able to capture the legacy of MAPTIS and move it into a whole new software system that is now Internet accessible," added Mitchell. "We can now access other NASA centers to help us understand their materials capabilities. Materials and processes professionals can exchange ideas and solicit others to help."

David Higginbotham/MSFC

Michael Mitchell, center, receives a One NASA Peer Award for the MAPTIS II team. NASA Associate Administrator Rex Geveden, left, and Marshall Center Director David King, right, presented the award at Marshall's Annual Honors Day. Other Marshall MAPTIS II team members receiving the award are listed at http://www.onenasa.nasa.gov/onehome.htm .

For information on the One NASA Peer Award or to nominate an individual or team for the award, visit http://www.onenasa.nasa.gov or contact Bruce Askins at bruce.askins@nasa.gov, Dave Edwards at david.l.edwards@nasa.gov or Laura Groce at laura.l.groce@nasa.gov. The One NASA Peer Award is one of the best ways to recognize the right individuals and teams for making the right contributions across the agency.

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